



Instructors' Guide to edu.NutrientNet.org

I. Setting up a class

1. Click on the “Instructor sign-up” link on the main page of <http://edu.nutrientnet.org/>
2. Complete the “Create a new account” page and then log in again with your created username and password.
3. You will now come to the “Create market” page. After naming the market, you may paste a list of e-mail addresses, one for each participant in the market, into the text box for “participant e-mails”. There should be one address on each line.

*Note: e-mail addresses can be changed after setting up a market, but **it is not possible to change the number of participants in a market once it has been created.** Hence, if a complete list of students' addresses is not available, use “dummy” addresses (e.g. *student01@MyUniversity.edu*), which can then be changed after the fact.*

4. Click “check data validity” then “complete market.” This may take a couple of minutes. You are now ready to set up your first NutrientNet trading exercise.

II. Setting up a trading period

In using NutrientNet, you may carry out numerous trading periods for a single market. Frequently the first period exercise is used to simply familiarize students with the use of the site. If all students are in a single room and logged on simultaneously, a period may take place in as little as 15-30 minutes. For out-of-class exercises, a trading period requires about 30 minutes of time on line, and participants should have at least one opportunity for questions. One week is typically sufficient. Later periods can occur in less time.

1. From the “Admin Home” page, click on “Add new period” link in the list under the appropriate market.
2. Give your period a name and set beginning and ending times and dates.
3. Choose a scenario from the list. A scenario defines what roles (point source/nonpoint source) are assigned to which students. Changing the scenario in subsequent trading periods will allow students to change roles. For example, if you choose scenario A_0 for your first period and A_1 for the second one, student roles will rotate with most point-sources from the first trading period becoming non-point sources in the next trading period.
4. Set the fine and trading ratio. The default rates are best for most exercises (see discussion below)
5. Click on “create.” If “notify participants about new period” is checked, the site will generate e-mails for all market participants informing them of the new trading period. This may take several minutes.

III. Grading and incentives

Widespread participation is important for NutrientNet to be useful as a teaching tool. Hence, incentives to participate are important. To help with this, and to help students become comfortable with NutrientNet, a “NutrientNet Assignment” can be downloaded and modified from the “Teaching Tools” page, which can be accessed from the main NutrientNet

homepage, <http://edu.nutrientnet.org>. Grading can also easily be done based on the data available on participation or performance, obtained by clicking on the  and  icons, respectively. These data can be downloaded to an Excel spreadsheet for analysis and grading.

There is an element of luck in how economically successful a participant is. Hence grading primarily on economic success is not usually appropriate.

IV. Assisting students

Inevitably students will have questions. NutrientNet allows instructors to help your students with such problems by impersonating their roles.

1. From the “Admin Home” page, click on the “View list” link or the  icon under the appropriate market.
2. On the “Market participants” page click on the corresponding  icon to play the role of the student. As an impersonator you are given access to the student profile and may evaluate BMPs, perform trades, etc. as the student. To return to your role as administrator, click the “Switch to Admin” link on the left menu.
3. If trouble or confusion remain, click on the feedback icon, , and NutrientNet support will assist you as promptly as possible.

V. Debriefing

A critical part of the NutrientNet learning process is to discuss the environmental and economic effectiveness of the trading program. NutrientNet provides several graphs and tables that provide information for such a discussion. From “Admin Home,” the  icon takes you to charts that present loading in the watershed both before the period and currently. Clicking on the  icon presents a number of economic statistics. Most critically, the Market Efficiency Analysis table compares the economic performance of the current market with a scenario in which trading were not allowed.

VI. Additional exercises

Some additional exercises and lessons:

1. A period in which the fine is set to zero. This facilitates a discussion of the ethics and economics of complying with environmental regulations.
2. A period in which the trading ratio is set to 0.1 (ten pounds of non-point reductions necessary to achieve one point source credit). This shows how tightening the restrictions on a program can lead to increased costs and, sometimes, worse environmental results.
3. A period in which one or two students are encouraged to try to corner the market. This allows a discussion of market power.
4. In general, NutrientNet can facilitate a discussion of the price process using the price history figure in the Period trading history page.